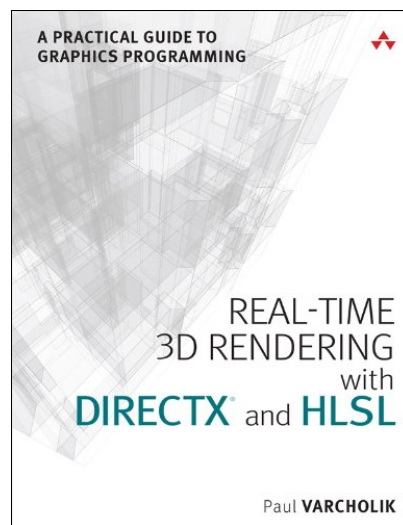


Best! Real-Time 3D Rendering with DirectX and HLSL: A Practical Guide to Graphics Programming (Game Design) PDF



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Best! Real-Time 3D Rendering with DirectX and HLSL: A Practical Guide to Graphics Programming (Game Design) by *by Paul Varcholik*

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Get Started Quickly with DirectX 3D Programming: No 3D Experience Needed

This step-by-step text demystifies modern graphics programming so you can quickly start writing professional code with DirectX and HLSL. Expert graphics instructor Paul Varcholik starts with the basics: a tour of the Direct3D graphics pipeline, a 3D math primer, and an introduction to the best tools and support libraries.

Next, you'll discover shader authoring with HLSL. You'll implement basic lighting models, including ambient lighting, diffuse lighting, and specular highlighting. You'll write shaders to support point lights, spotlights, environment mapping, fog, color blending, normal mapping, and more. Then you'll employ C++ and the Direct3D API to develop a robust, extensible rendering engine. You'll learn about virtual cameras, loading and rendering 3D models, mouse and keyboard input, and you'll create a flexible effect and material system to integrate your shaders.

Finally, you'll extend your graphics knowledge with more advanced material, including post-processing techniques for color filtering, Gaussian blurring, bloom, and distortion mapping. You'll develop shaders for casting shadows, work with geometry and tessellation shaders, and implement a complete skeletal animation system for importing and rendering animated models.

You don't need any experience with 3D graphics or the associated math: Everything's taught hands-on, and all graphics-specific code is fully explained.

Coverage includes

- The Direct3D API and graphics pipeline
- A 3D math primer: vectors, matrices, coordinate systems, transformations, and the DirectX Math library
- Free and low-cost tools for authoring, debugging, and profiling shaders
- Extensive treatment of HLSL shader authoring
- Development of a C++ rendering engine
- Cameras, 3D models, materials, and lighting
- Post-processing effects
- Device input, component-based architecture, and software services
- Shadow mapping, depth maps, and projective texture mapping
- Skeletal animation
- Geometry and tessellation shaders
- Survey of rendering optimization, global illumination, compute shaders, deferred shading, and data-driven engine architecture

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Best! Real-Time 3D Rendering with DirectX and HLSL: A Practical Guide to Graphics Programming (Game Design) Review

This Best! Real-Time 3D Rendering with DirectX and HLSL: A Practical Guide to Graphics Programming (Game Design) book is not really ordinary book, you have it then the world is in your hands. The benefit you get by reading this book is actually information inside this reserve incredible fresh, you will get information which is getting deeper an individual read a lot of information you will get. This kind of Best! Real-Time 3D Rendering with DirectX and HLSL: A Practical Guide to Graphics Programming (Game Design) without we recognize teach the one who looking at it become critical in imagining and analyzing. Don't be worry Best! Real-Time 3D Rendering with DirectX and HLSL: A Practical Guide to Graphics Programming (Game Design) can bring any time you are and not make your tote space or bookshelves' grow to be full because you can have it inside your lovely laptop even cell phone. This Best! Real-Time 3D Rendering with DirectX and HLSL: A Practical Guide to Graphics Programming (Game Design) having great arrangement in word and layout, so you will not really feel uninterested in reading.